ing conditions, the capacity of one of the scrolls can be increased by approximately 20% to provide one set of the scrolls with 120% of its capacity which is 110% of the capacity of compressor system **110** as shown in the graph in FIG. **11**. In order to be able to control the capacity of one set of scrolls **56** and **70** of compressor system **110**, a solenoid valve **208** is positioned within piping **206**. The amount of percent increase in the capacity of one set of scrolls **58** and **70** of compressor system **110** can be controlled by operating solenoid valve **208** in a pulse width modulation mode. Solenoid valve **208** when operated in a pulse width modulation mode in combination with capacity control system **112** of compressor system **110** allows the capacity of compressor system **110** to be positioned anywhere along the line shown in FIG. **11**.

Referring now to FIG. **12**, there is shown a compressor system which includes a unique capacity control system in accordance with another embodiment of the present invention and which is designated generally by the reference numeral **210**. Compressor system **210** is the same as compressor system **110**, except that both pairs of scrolls **56** and **70** incorporate both capacity control system **112** and fluid injection system **168**. By incorporating capacity control system **112** and fluid injection system **168** into both pairs of scrolls **56** and **70**, the capacity of compressor system **210** can be varied from 0% to 120%.

The description of the invention is merely exemplary in nature and, thus, variations that do not depart from the gist of the invention are intended to be within the scope of the invention. Such variations are not to be regarded as a departure from the spirit and scope of the invention.

What is claimed is:

1. A scroll machine comprising:

an outer shell defining a suction pressure zone;

a first scroll compressor disposed within said suction pressure zone of said shell;

a second scroll compressor disposed within said suction pressure zone of said shell;

a drive shaft extending between and coupled to each of said first and second scroll compressors said drive shaft operable to drive said first and second scroll compressors for compressing fluid disposed within said suction pressure zone;

a mounting frame disposed within said suction pressure zone of said shell, said first and second scroll compressors being attached to said mounting frame;

a motor disposed within said suction pressure zone of said shell between said first and second scroll compressors, said motor being attached to said mounting frame and drivingly coupled to said drive shaft; and

an oil sump disposed between said outer shell and said mounting frame, said oil sump being in communication with said first scroll compressor through a first bore in said drive shaft and said second scroll compressor through a second bore in said drive shaft.

2. The scroll machine in accordance with claim **1**, wherein said motor comprises:

a stator attached to said mounting frame; and

a rotor attached to said drive shaft.

3. The scroll machine in accordance with claim **1**, wherein said first scroll compressor comprises:

a first scroll member having a first spiral wrap projecting outwardly from a first end plate;

a second scroll member having a second spiral wrap projecting outwardly from a second end plate, said second spiral wrap being interleaved with said first spiral wrap to define a first plurality of moving chambers therebetween when said second scroll member orbits with respect to said first scroll member; and

a first main bearing housing attached to said mounting-frame, said first main bearing housing rotatably supporting said drive shaft.

4. The scroll machine in accordance with claim **3**, wherein said mounting frame is disposed between said first main bearing housing and said shell.

5. The scroll machine in accordance with claim **3**, wherein said second scroll compressor comprises:

a third scroll member having a third spiral wrap projecting outwardly from a third end plate;

a fourth scroll member having a fourth spiral wrap projecting outwardly from a fourth end plate, said fourth spiral wrap being interleaved with said third spiral wrap to define a second plurality of moving chambers therebetween when said fourth scroll member orbits with respect to said third scroll member; and

a second main bearing housing attached to said mounting frame, said second main bearing housing rotatably supporting said drive shaft.

6. The scroll machine in accordance with claim **5**, wherein said mounting frame is disposed between said first main bearing housing and said shell and between said second main bearing housing and said shell.

7. The scroll machine in accordance with claim **1**, wherein said shell defines a first discharge pressure chamber in communication with said first scroll compressor and a second discharge chamber in communication with said second scroll compressor.

8. The scroll machine in accordance with claim **7**, wherein said first and second scroll compressors are disposed within said suction pressure chamber.

9. The scroll machine in accordance with claim **1**, further comprising a first capacity modulation system for varying the capacity of said first scroll compressor.

10. The scroll machine in accordance with claim **9**, wherein said first capacity modulation system includes a pulse width modulation system.

11. The scroll machine in accordance with claim **9**, further comprising a second capacity modulation system for varying the capacity of said second scroll compressor.

12. The scroll machine in accordance with claim **11**, wherein said first capacity modulation system includes a first pulse width modulation system and said second capacity modulation system includes a second pulse width modulation system.

13. The scroll machine in accordance with claim **1**, wherein said motor is a variable speed motor.

14. The scroll machine in accordance with claim **1** wherein:

said first scroll compressor comprises a first non-orbiting scroll member interleaved with a first orbiting scroll member, said first non-orbiting scroll member being mounted for axial movement within said outer shell; and

said second scroll compressor comprises a second non-orbiting scroll member interleaved with a second orbiting scroll member, said second non-orbiting scroll member being mounted for axial movement within said outer shell.

15. The scroll machine in accordance with claim **1** further comprising a first fluid injection fitting extending through said outer shell for implementing a first vapor injection system for said first scroll compressor.

16. The scroll machine in accordance with claim 15 further comprising a second fluid injection fitting extending through said outer shell for implementing a second vapor injection system for said second scroll compressor.

17. The scroll machine in accordance with claim 16, further comprising a first capacity modulation system for varying the capacity of said first scroll compressor.

18. The scroll machine in accordance with claim 17, wherein said first capacity modulation system includes a pulse width modulation system.

19. The scroll machine in accordance with claim 17, further comprising a second capacity modulation system for varying the capacity of said second scroll compressor.

20. The scroll machine in accordance with claim 19, wherein said first capacity modulation system includes a first pulse width modulation system and said second capacity modulation system includes a second pulse width modulation system.

21. The scroll machine in accordance with claim 15, further comprising a first capacity modulation system for varying the capacity of said first scroll compressor.

22. The scroll machine in accordance with claim 21, wherein said first capacity modulation system includes a pulse width modulation system.

23. The scroll machine in accordance with claim 21, further comprising a second capacity modulation system for varying the capacity of said second scroll compressor.

24. The scroll machine in accordance with claim 23, wherein said first capacity modulation system includes a first pulse width modulation system and said second capacity modulation system includes a second pulse width modulation system.

25. The scroll machine in accordance with claim 1 wherein said drive shaft includes a first eccentric crank pin and a second eccentric crank pin, said first and second crank pin defining a crank pin axis disposed eccentric from an axis of said drive shaft.

26. The scroll machine in accordance with claim 1 wherein a single suction inlet extends through said outer shell, said single suction inlet being in communication with said suction pressure zone.

27. The scroll machine in accordance with claim 1 further comprising a first oil pump in communication with said oil sump and said first scroll compressor.

28. The scroll machine in accordance with claim 27 further comprising a second oil pump in communication with said oil sump and said second scroll compressor.

29. The scroll machine in accordance with claim 1 wherein said outer shell comprises a generally cylindrical shell, a first end cap welded to one end of said generally cylindrical shell and a second end cap welded to an opposite end of said generally cylindrical shell.

30. A scroll machine comprising:

an outer shell defining a suction pressure zone;

a first scroll compressor disposed within said suction pressure zone of said shell, said first scroll compressor including a first non-orbiting scroll member interleaved with a first orbiting scroll member, said first orbiting scroll member being mounted for radial movement within said outer shell;

a second scroll compressor disposed within said suction pressure zone of said shell, said second scroll compressor including a second non-orbiting scroll member interleaved with a second orbiting scroll member, said second orbiting scroll member being mounted for radial movement within said outer shell;

a drive shaft extending between and coupled to each of said first and second orbiting scroll members, said drive shaft operable to drive said first and second scroll compressors for compressing fluid disposed within said suction pressure zone; and

a motor disposed within said suction pressure zone shell between said first and second scroll compressors, said motor being drivingly coupled to said drive shaft.

31. A scroll machine comprising:

an outer shell defining a suction pressure zone;

a first scroll compressor disposed within said suction pressure zone of said shell, said first scroll compressor comprising:

a first scroll member having a first end plate and a first spiral wrap extending therefrom;

a second scroll member having a second end plate and a second spiral wrap extending therefrom, said first and second scroll members being positioned with said first and second spiral wraps interleaved with each other;

a second scroll compressor disposed within said suction pressure zone of said shell, said second scroll compressor comprising;

a third scroll member having a third end plate and a third spiral wrap extending therefrom;

a fourth scroll member having a fourth end plate and a fourth spiral wrap extending therefrom, said third and fourth scroll members being positioned with said third and fourth spiral wraps interleaved with each other;

a drive shaft extending between and coupled to each of said first and third scroll members said drive shaft operable to drive said first and second scroll compressors for compressing fluid disposed within said suction pressure zone;

said second scroll member being movable between a first relationship in which sealing surfaces of said first and second scroll members are in sealing relationship to close off first fluid pockets and a second relationship wherein at least one of said sealing surfaces of said first and second scroll members are spaced apart to define a first leakage path between said first fluid pockets; and

a first fluid operated piston secured to said second scroll member, said first fluid operated piston being actuatable to apply a force to said second scroll member to move said second scroll member between said first relationship where said first scroll compressor operates at substantially full capacity and said second relationship where said first scroll compressor operates at substantially zero capacity.

32. The scroll machine according to claim 31, wherein said first fluid operated piston is operated in a time pulsed manner to modulate the capacity of said first scroll compressor.

33. The scroll machine according to claim 31, further comprising a fluid pressure chamber operative to apply said force to said first fluid operated piston.

34. The scroll machine according to claim 33, wherein said force acts in an axial direction.

35. The scroll machine according to claim 34, further comprising a first passage for supplying a pressurized fluid from said first scroll compressor to said pressure chamber.

36. The scroll machine according to claim 35, further comprising a valve for controlling flow through said first passage, said valve being operative to vent said pressurized

fluid from said pressure chamber to thereby enable said second scrolls to move between said first and second relationships.

37. The scroll machine according to claim 36, wherein said valve is a solenoid operated valve.

38. The scroll-type machine according to claim 37, wherein said solenoid operated valve is operated in a pulse width modulated mode.

39. The scroll machine according to claim 35, further comprising a second passage for venting said pressurized fluid from said pressure chamber.

40. The scroll machine according to claim 31 wherein said fourth scroll member is movable between a first relationship in which sealing surfaces of said third and fourth scroll members are in sealing relationship to close off second fluid pockets and a second relationship wherein at least one of said sealing surfaces of said third and fourth scroll members are spaced apart to define a second leakage path between said second fluid pockets, and said scroll machine further comprises:

a second fluid operated piston secured to said fourth scroll member, said second fluid operated piston being actuatable to apply a force to said fourth scroll member to move said fourth scroll member between said first relationship where said second scroll compressor operates at substantially full capacity and said second relationship where said second scroll compressor operates at substantially zero capacity.

41. The scroll machine according to claim 40 further comprising:

a first fluid injection fitting extending through said outer shell for implementing a first vapor injection system for said first scroll compressor; and

a second fluid injection fitting extending through said outer shell for implementing a second vapor injection system for said second scroll compressor.

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